Retrospect of a Coleopterist for 1906.

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The increase to our list during the past year has not been of so remarkable a character as that which I had to record for the year 1905, nevertheless, several most unexpected and striking additions have been made, altogether no fewer than twelve species and four varieties have been added to our list.

Hydrochus nitidicollis, Muls.—Recorded by Mr. H. St. J. Donisthorpe (Ent. Record, xviii., p. 133); the insect was taken in the River Meavy,

near Plymouth, on April 13th last.

Dinarda pyamaea, Wasm., is another of Mr. Donisthorpe's records (loc. cit., p. 217). The species was taken by Mr. Keys in Cornwall some two or three years ago, and was originally named for him as dentata, Grv.; it occurs with Formica rupibarbis var. fusco-rupibarbis, For. In introducing the species Mr. Donisthorpe gave a useful table showing the relationship of the Dinarda family to their various hosts.

Lomechusa strumosa, F. (loc. cit., p. 159).—This is certainly the most interesting addition to our list during the past year, and Mr. Donisthorpe is to be congratulated on the success which has attended his careful work amongst myrmecophilous coleoptera. Single specimens of this beautiful beetle have been twice taken in this country before, but nearly 200 years have elapsed since the first of these records, and the beetle has long disappeared from our list. Mr. Donisthorpe's specimens were captured at Woking with Formica sanguinea, the first specimen being taken on May 25th, and six others on the 29th.

Homalota paradoxa, Rey (Ent. Mo. Mag., xlii., p. 201).—This is one of the several additions due to the good work which Dr. Joy has recently been doing in regard to the coleopterous inhabitants of the nests of birds and small mammals. The insect occurred in moles' nests; two specimens had been taken some years ago by Mr.

Champion, but the capture had never been put on record.

Quedius rexans, Epp. (loc. cit., p. 200).—This addition, also due to Dr. Joy, is a very characteristic moles' nest species, and, in recording its occurrence, Dr. Joy gave a table which will be found very useful in identifying the species of the group of Quedius with red elytra and unicolorous antenna.

Lathrobium laevipenne, Heer (loc. cit., p. 55).—This record is due to Mr. W. E. Sharp, who captured a single specimen near Oxted in August 1905; it belongs to the red-winged group. Mr. Sharp gave a number of characters by which it could be distinguished from its close allies.

Enplectus tomlini, Joy (loc. cit., p. 99).—Dr. Joy took sixteen examples of this species in February last in an old starling's nest, and subsequently bred others from the same nest. The species could not be identified with any known European forms, and Dr. Joy has, therefore, described it as new to science; it is apparently a well-marked species, abundantly distinct from other British members of the genus.

Corticaria crenicollis, Mannh. (Ent. Record, xviii., p. 276).—This is another of the numerous records of Dr. Joy. The species was taken at Basildon, Berkshire, in August last, from dead and quite dry oak branches; Mr. Pool has also taken the species at Epping, under bark. On examining the "Power collection," Dr. Joy found specimens of this

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species mixed with *C. serrata*, and there are one or two other specimens in British collections.

Cryptomorpha desjardinsi, Guér. (loc. cit., p. 275).—This cosmopolitan species has been taken by Mr. R. S. Bagnall in a cellar at his house at Winlaton-on-Tyne. A single specimen was taken by Mr. E. A. Waterhouse some fifteen years ago in London on a bunch of bananas. Though these specimens were most probably introduced, there is every possibility that the beetle will eventually become acclimatised and will, therefore, be quite as much entitled to a place in our list as many of the other cosmopolitan species which have gradually been introduced into this country.

Cardiophorus erichsoni, Buyss. (Ent. Mo. Mag., xlii., p. 156).—This species was taken by Dr. Joy and Mr. J. R. Tomlin during their visit to Lundy Island last April. The specimens were found under small stones, or at the roots of grass. This species was introduced into our list by Mr. Champion under the name of runpes, Fourc., nearly twenty years ago, but there was probably some mistake about the actual origin of this specimen, and, therefore, the Lundy Island captures are really

additions to the British list.

Ptinus pusillus, Stm., (Ent. Record, xviii., p. 45).—Mr. Donisthorpe records this species from captures by Mr. Pool at a corn shop at Edmonton. It is a common species in France and Germany, and lives in granaries; it is probably another of those species which are being distributed by commerce all over the world.

Carida affinis, Pk., (Ent. Mo. May., xlii., p. 220).—Dr. Sharp introduced this species on the authority of specimens taken by Col. Yerbury and Mr. G. C. Lamb, in Strathspey, in July last. The species

occurred in fungus on old trees.

The following new varieties were also introduced into our list:—Dromius agilis ab. bimaculatus, Dej., by Mr. Donisthorpe (Ent. Record, xviii., p. 75); this aberration was taken by scraping the lichen off the bark of a tree at Battle, near Hastings. Homalium caesum ab. subruticorne, n.ab., by Mr. R. S. Bagnall (loc. cit., p. 72), specimens were taken from a rotten Polyporus, at Gibside; the Rev. T. Wood has also taken this aberration at Rannoch; Stenus ossium var. insularis, n. var., taken on Lundy Island in August, 1905, by Dr. Joy, and described by him (Ent. Mo. Mag., xlii., p. 5); Lathrobium elongatum var. nigrum, n. var., described by Dr. Joy (loc. cit., p. 271) from specimens taken in Devon, in 1902.

The only note dealing with synonymy is one by Mr. G. Lewis (loc. cit., p. 255), in which he states that, in his opinion, Hister 12-striatus,

Schrk., and Hister 14-striatus, Gyll., are distinct species.

Of the above additions to our list, only one, I think, should appear in the supplementary list of "Beetles introduced by commerce since 1900, and since breeding in this country," which I suggested last year,

namely, Cryptomorpha desjardinsi.

A considerable number of beetles, usually considered to be very rare, have been put on record during the past year, and a few of these records are now given:—Eumicrus rufus, Müll., taken by Mr. Pool at Enfield, and by Mr. Butler at Hendon; Quedius longicornis, Kr., captured by Mr Britten in flood refuse in Cumberland, and by Mr. Morley at Monk's Soham, Suffolk; Donacia obscura, Gyll., appears to occur in some numbers at Sutton Broad, where it was first taken by

Mr. Balfour Browne; Oxypoda soror, Th., taken by Mr. Donisthorpe and the writer on Snowdon; Anisotoma lucens, Fair., swept by Mr. Donisthorpe at Woodhay, near Newbury; Henoticus serratus, Gyll., taken by Mr. Donisthorpe near Newbury, and by Mr. Kidson Taylor in North Wales; Cryptohypnus pulchellus, L., taken by Mr. Black and the writer near Newtonmore; Acrulia inflata, Gyll., taken by Mr. Bagnall and the writer at Winlaton-on-Tyne; Quedius riparius, Kell., taken near Bakewell, in Derbyshire, by Mr. J. Kidson-Taylor; Procas armillatus, F., found near Dartford, by Mr. Jennings; Lamprinus saginatus, Gr., taken at Tubney by Commander Walker; Enplectus minutissimus, Aub., swept up by Commander Walker near Oxford; Calosoma sycophanta, L., is another of Commander Walker's many good captures, it was taken in the New Forest, another was taken in the Forest at Lyndhurst; Carpophilus sexpustulatus, F., taken by Mr. Bayford and Dr. Corbett near Doncaster, under conditions which apparently prove that it regularly breeds in this country in the open; Acrognathus mandibularis, Gyll., taken in some numbers by Mr. Champion at Horsell; Otiorhynchus morio, F., var. ebeninus, Gyll., taken by Mr. Kidson-Taylor in 1901, near Loch Assynt, in Sutherlandshire: Sitaris muralis, Forst., found in some numbers near Oxford, by Mr. Hamm.

A number of interesting articles have appeared during the year in the pages of the entomological journals. The important problems concerned with island fauna have been dealt with in an interesting paper by Dr. Joy on the coleopterous fauna of Lundy Island (Ent. Mo. Mag., xlii., p. 1). Dr. Joy visited the Island in August, 1905, and in his article gives a complete list of the whole of the species of coleoptera which have so far been recorded from Lundy Island; up to the date of this article 260 species had been taken. It was in a later visit, in April 1906, when accompanied by Mr. Tomlin, that Cardiophorus erichsoni was added to our list. I published a note (loc. cit., p. 77), giving a list of the coleoptera taken by Mr. W. Eagle Clarke on the remote Fair Isle.

The interesting antipodean field notes by Commander J. J. Walker, were, during the past year, continued and concluded in the *Entomologists' Monthly Magazine*, pp. 22, 50; these notes will undoubtedly prove of great value to any visitor to Australia who is anxious to do a little collecting while sight-seeing; the numerous hints as to the best localities, and the habitats of many of the more striking species, will undoubtedly save such a collector a considerable amount of time.

Mr. R. S. Bagnall in a paper entitled "Coleoptera imported into our northern ports" (loc. cit., p. 36) gives a long list of introduced species, and a study of this list shows how important it is that some such arrangement should be adopted, as I suggested in my retrospect last year, for separating from the general list these introduced species.

Two or three interesting papers (in addition to those already mentioned), dealing more or less with synonymy and morphological characters for separating allied species, have appeared during the year. The Rev. G. A. Crawshay, in a paper entitled "Further notes on Amara anthobia, Villa," and the "Comparative Morphology of A. familiaris, Duft., A. anthobia, and A. lucida, Duft." (loc. cit., p. 13), describes fully the characters which may safely be employed in separating these allied species, dealing with size differences, coloration differences, absence,

or presence, of prescutellary pores, etc. This paper embodies the results of a large amount of careful work, and should prove of great use to any collector who is in doubt as to which of these three species a specimen belongs.

In "Notes on the coleopterous genus Dacne, Latr." (Ent. Record, xviii., p. 72), Dr. Joy gives briefly the salient characters of all the European species of this genus, and explains carefully the characteristics

which separate D. fowleri, Joy, from the allied species.

Two species which have long proved a stumbling-block to collectors are Agabus ațiinis, Pk., and A. unquicularis, Thoms.; Mr. F. Balfour Browne, in a paper illustrated with two carefully drawn plates (loc. cit., p. 273), goes fully into the question of the characters which can be relied upon in separating the two species. There has been undoubtedly considerable confusion in the record of these two species, and it is very desirable that any coleopterist who has in his collection specimens of either, or both, of these species, should now carefully re-examine them in the light of the information given by Mr. Balfour Browne, and, if erroneous records have been made, correct them. There seems to be a marked difference in the recorded distribution of these two species in Great Britain.

Life-histories and similar problems have been dealt with in quite a large number of articles. First and foremost are Dr. Joy's extremely valuable papers on the "Coleoptera occurring in the nests of mammals and birds" (Ent. Mo. Mag., xlii., pp. 198, 237). Dr. Joy first drew attention to the matter in a short note (loc. cit., p. 39) in which he gave a list of rare coleoptera taken in birds' nests. Mr. Chitty (loc. cit., p. 115) gave a list of the rare species he had been able to take in starlings' nests by following Dr. Joy's methods. Not only has Dr. Joy been able to add several new species to our list, but, in addition, he has taken, in numbers in many cases, species hitherto considered extremely rare and represented only in a few of our collections by odd specimens, such as Quedius brevicornis, Th.; Heterothops nigra, Kr.; Aleochara spadicea, Er.; Microglossa marginalis, Gyll.; M. gentilis, Märk.; Philonthus fuscus, Gr.; Cholera colonoides, Er.; etc. Dr. Joy has, in fact, opened up quite a new field of work, and his notes contain records of many interesting points in the life-history of these beetles and of the manner in which they have gradually adapted their means of defence to the ways of their hosts.

Other notes to which reference may be briefly made are the following:—"Drilus flavescens, Rossi, and its larva," by Mr. E. G. Bayford (loc. cit., xlii., p. 267), with a description of the larva and a brief account of the rearing of a female imago from the larva; "Relation between Epuraea angustula, Er., and Acrulia inflata, Gyll.," by Mr. R. S. Bagnall (Ent. Record, xviii., p. 325); "Notes on the Stridulation of Cychrus rostratus, L., and on Liodes, Lat., a genus of night-flyers," by the same gentleman (loc. cit., p. 73); "Distasteful Carabids," a short note by Mr. Donisthorpe, pointing out that the odour of Carabus riolaceus, L., is the same as that of butyric acid (loc. cit., p. 325). The same gentleman has contributed a series of valuable myrmecophilous notes for 1906, summarising all the work that has been done, mainly by himself, with ants' nests during the past year (loc. cit., pp. 288, 317). Mr. W. E. Sharp, in a short article entitled "Some Notes on the Physiological Criterion of Species,"

emphasises (loc. cit., p. 319) the importance of morphological

characters in differentiating between closely allied species.

The Coleoptera papers in the Transactions of the Entomological Society of London for 1906 are comparatively few, but are of some interest. Mr. Jacoby (1906, pt. i., p. 11), in a lengthy paper, entitled "Descriptions of new Genera and Species of African Halticinae and Galerucinae," described no fewer than four new genera and sixty new species. This paper is one which must be studied carefully by all who are working at the coleopterous fauna of Africa.

Dr. G. B. Longstaff, in a communication (loc. cit., p. 91) dealing with some bionomic points in certain species of South African lamellicorns, described observations he had made in the field during his recent visit to South Africa, both in regard to certain mimetic protective resemblances he had observed in some flower-frequenting species, and also in regard to the probable value to the insect of the exceedingly long hind legs, which are so characteristic of many South

African Hopliinae.

In my "Retrospect for 1905," I briefly alluded to a paper by Mr. A. M. Lea in the Transactions of the Ent. Soc. London (1905, p. 365) on "The blind coleoptera of Australia and Tasmania." The author states that there are only eight blind species at present known from Australia and Tasmania, and curiously enough none of these are found in caves. He gives notes of all the species, and it is interesting to find that our well-known blind beetle, Anommatus 12-striatus, Müll., was taken by Mr. Lea at Hobart, Tasmania, at the roots of grass.

Mr. F. Balfour Browne has published a second paper on his study of the "Aquatic Coleoptera and their surroundings in the Norfolk Broads" (Transactions Norfolk and Norwich Entomologists' Society, viii), and, like the first paper, it is one of very high bionomic interest and value to students of British water-beetles. I have not yet had an opportunity of studying this paper in detail, and must reserve therefore

my comments upon it for the present.

The 29th (1905) Annual Report and Proceedings of the Lancashire and Cheshire Entomological Society contains three papers of much interest to coleopterists, viz., the Vice-Presidential Address of Mr. H. St. J. Donisthorpe, the main subject of which was the myrmecophilous coleoptera of Great Britain; "Notes on Manx Coleoptera," by Mr. J. R. Tomlin, with very full lists of the species which have been taken on the island; and, lastly, "Notes on the birth and infancy of Dytiscus punctulatus," F., by Mr. E. J. Burgess Sopp. The society is to be congratulated on the excellence of its papers, and on the good work it is doing in stimulating interest in the fauna of the counties of Lancashire and Cheshire.

The year which has just closed has not been quite such a fruitful one as 1905, nevertheless good work has been done, but the number of earnest workers must be larger if we are to increase in a satisfactory way from year to year the scientific knowledge of our beetle fauna.

The Identity of the British Nonagria neurica (with plate). By H. M. EDELSTEN, F.E.S.

(Continued from p. 4.)

Guenée refers (Histoire Naturelle des Insectes, Noctuélites, i., p. 106),